1. Substance/preparation and company identification

Company
BASF CANADA
100 Milverton Drive
Mississauga, ON L5R 4H1

24 Hour Emergency Response Information
CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Chemical family: amine

2. Hazardous ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Hazardous ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-50-3</td>
<td>60.0 - 100.0 %</td>
<td>p-phenylenediamine</td>
</tr>
</tbody>
</table>

3. Hazard identification

Emergency overview
IRRITANT. TOXIC. May cause sensitization by skin contact.
Irritating to eyes and skin.
Toxic by inhalation, in contact with skin and if swallowed.
Avoid contact with the skin, eyes and clothing.
Eye wash fountains and safety showers must be easily accessible.
Wash thoroughly after handling.
Wear full face shield if splashing hazard exists.
Wear a NIOSH-certified (or equivalent) organic vapour respirator.
Wear NIOSH-certified chemical goggles.
Wear chemical resistant protective gloves.

Potential health effects

Acute toxicity:
Toxic by inhalation, in contact with skin and if swallowed.

Irritation:
Irritating to eyes.

4. First-aid measures

General advice:
Remove contaminated clothing.
If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:
Wash thoroughly with soap and water.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth thoroughly with water, seek medical attention.

**Note to physician**
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

### 5. Fire-fighting measures

Flash point: 156 °C
Lower explosion limit: 1.3 % (V)
Upper explosion limit: 9.8 % (V)

**Suitable extinguishing media:**
dry extinguishing media, foam

**Unsuitable extinguishing media for safety reasons:**
carbon dioxide

**Additional information:**
Avoid whirling up the material/product because of the danger of dust explosion.

**Hazards during fire-fighting:**
oxides, toxic gases/vapours, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

**Protective equipment for fire-fighting:**
Wear a self-contained breathing apparatus.

**Further information:**
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

### 6. Accidental release measures

**Personal precautions:**
Avoid dust formation. Use personal protective clothing.

**Environmental precautions:**
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

**Cleanup:**
Avoid raising dust.

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
7. Handling and storage

Handling

General advice:
Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:
Avoid dust formation. Take precautionary measures against static discharges.

Storage

General advice:
Keep container tightly closed and dry; store in a cool place.
Avoid all sources of ignition: heat, sparks, open flame.

Storage incompatibility:
General: Segregate from oxidants. Segregate from acids.

8. Exposure controls and personal protection

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-phenylenediamine</td>
<td>PEL 0.1 mg/m³ ; Skin Designation ;</td>
<td>TWA value 0.1 mg/m³ ;</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles).

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Due to the colouring properties of the product closed work clothes should be used, to avoid stains during manipulation.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>powder</td>
</tr>
<tr>
<td>Odour</td>
<td>faint specific odour</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>Colour</td>
<td>brown</td>
</tr>
<tr>
<td>pH value</td>
<td>8 - 9 ; ( 10 g/l, 20 °C)</td>
</tr>
<tr>
<td>Melting point</td>
<td>approx. 140 °C</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>1.4 mbar ; ( 100 °C)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>47 g/l ; ( 25 °C)</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Hazardous reactions:
Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.
May react with oxidizing agents.
Reacts with strong acids.

Decomposition products:
Hazardous decomposition products: nitrogen oxides

**Thermal decomposition:**
> 400 °C

### 11. Toxicological information

#### Acute toxicity

**Oral:**
LD₅₀/rat: 80 mg/kg

**Inhalation:**
LC₅₀/rat: 0.25 - 1 mg/l / 4 h (OECD Guideline 403)

**Dermal:**
LD₅₀/rabbit: 50 - 400 mg/kg (OECD Guideline 402)

**Skin irritation:**
rabbit: non-irritant

**Eye irritation:**
rabbit: Irritant.

### 12. Ecological information

#### Biodegradation:

**Test method:** OECD 302B; ISO 9888; 88/302/EEC, part C

**Degree of elimination:** 50 - 100 %

**Environmental toxicity**

**Acute and prolonged toxicity to fish:**
golden orfe/LC₅₀ (96 h): 0.1 - 1 mg/l

**Acute toxicity to aquatic invertebrates:**
Daphnia magna/EC₅₀ (48 h): 0.28 mg/l

**Toxicity to microorganisms:**
ETAD fermentation tube test EC₅₀: 250 mg/l

**Other ecotoxicological advice:**
Do not release untreated into natural waters. Do not allow to enter soil, waterways or waste water channels.

**Other adverse effects**

The product contains:
Because of the manufacturing process the product does not contain heavy metals.

### 13. Disposal considerations

**Waste disposal of substance:**
Must be dumped or incinerated in accordance with local regulations.

**Container disposal:**
The packaging must not be re-used. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### 14. Transport information

**Land transport**

*TDG*

- **Proper shipping name:** PHENYLENEDIAMINES
- **Hazard class:** 6.1
- **ID number:** UN 1673
- **Packing group:** III

**Sea transport**

*IMDG*

- **Proper shipping name:** PHENYLENEDIAMINES
- **Hazard class:** 6.1
- **ID number:** UN 1673
- **Packing group:** III
- **Marine pollutant:** YES

**Air transport**

*IATA/ICAO*

- **Proper shipping name:** PHENYLENEDIAMINES
- **Hazard class:** 6.1
- **ID number:** UN 1673
- **Packing group:** III

### 15. Regulatory information

**Federal Regulations**

- **Registration status:** DSL, CA released / listed

**WHMIS classification:**

- **D1B:** Materials Causing Immediate and Serious Toxic Effects - Toxic material
- **D2B:** Materials Causing Other Toxic Effects - Toxic material

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.
16. Other information

Local contact information
BASF Canada Product Safety
289-360-1300

END OF DATA SHEET